



# Program Structural Concrete Sample Life Cycle



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#### Introduction

Program structural concrete sample life cycle (SLC) is governed by Program MAC Spec 346. These instructions are general instructions designed to assist the data entry personnel for program structural concrete samples.

These samples are required by the authority of a Materials Manual Section. For example, the program structural concrete samples taken at a prestressed concrete production facility are governed by Materials Manual Section 8.1. Materials Manual Section 8.1 references FDOT Specifications Section 346 for material method of acceptance requirements. That is why the samples are logged under Program MAC Spec 346. The Program and Project Versions of the 346 MAC Spec are slightly different because Materials Manual 8.1 does define some things differently for prestressed concrete samples, such as the lot size. The lot size for project samples is based on a specific contract. The lot size for prestressed concrete program samples is not based on contract(s).

These instructions describe the system functions for the sample life cycle. If there is a conflict between these instructions and the specific requirements of the governing document(s), the governing document(s) take precedence over these instructions.

#### **Chapter 1 – Sample Login**

#### A. Creating a Sample

A program structural concrete sample is normally entered by a data entry person in the company of the prestressed production facility or their QC firm for QC. The VT sample is normally created by the Department's Verification Technician or data entry person. To perform these steps, you must be a user with the company role of Data Entry or Data Reviewer. If you are a user with System Roles and Company roles, make sure you are logged in under your company roles, not your system roles. If you are a user assigned to more than one company profile, make sure you are logged in under the appropriate company profile.



1. From the MAC home screen, select the Manage Samples menu option.



- 2. Select the Create Sample Login page level action on the left side of the screen.
- A Create Sample dialog box will appear. A red star (★) indicates a required field.

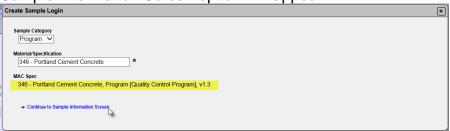


3. The Sample Category dropdown list defaults to Project. Change this to Program by selecting Program from the drop down list.



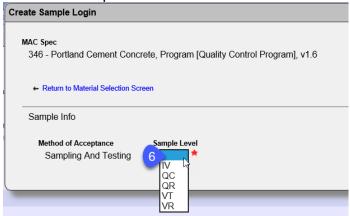
4. Enter 346 in the Material/Specification field. Select 346 – Portland Cement Concrete by clicking on it or pressing the enter key.

The system will default to the latest version of Program MAC Spec 346 and the Continue to Sample Information Screen option will appear.



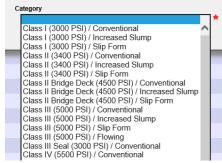
5. Select the Continue to Sample Information Screen option.

The dialog box will be expand to show more fields. Additional fields will be added as more information is provided.



- 6. Select the appropriate sample level from the Sample Level dropdown list.
- a. IV = sample taken by any personnel in FDOT for reasons other than program material acceptance.
- b. QC = sample taken by prestressed concrete production facility QC personnel
- c. QR = the QC hold cylinder from the verified lot entered for resolution purposes when the comparison package (<u>Chapter 7 Sample Comparison Packages</u>) has a status of Does Not Compare
- d. VR = the VT hold cylinder from the verified lot entered for resolution purposes when the has a status of Does Not Compare
- e. VT = sample taken by FDOT Verification personnel to determine if QC results can be used for acceptance

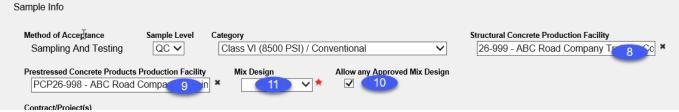
The Category field will appear after the sample level is selected. This is actually a combination of the category and type from the Program MAC Spec 346. The MAC Spec Category is equivalent to the 346 class of concrete and the type is one of five possible entries; Conventional, Increased Slump, Slip Form, Flowing and Self Consolidating. Not all categories have all types. When selecting this field, the selection is a combination of the category and type at once; for example, Class IV / Flowing is one selection.



7. Select the appropriate category / type combination for the mix design being used.

**NOTE**: it is important to ensure you select the appropriate entry. Not all limits for passing results are contained in the mix design. Most are contained in the MAC Spec. This selection will determine which of the MAC Spec limits are applied to the sample. If you select the wrong one, the results may show as failing when they actually pass or vice versa.

New fields will appear in the Sample Info portion of the login screen and other sections will appear.



- 8. Enter the structural concrete production facility that batched the 346 concrete for the prestressed concrete samples. This may be a structural concrete production facility at the prestressed concrete products production facility or it may be delivered from a different structural concrete production facility. For this reason, the structural concrete production facility id (26-998), not the prestressed concrete products production facility id (PCP26-998) is entered in this field. The field is restricted to the selection of production facilities with the material type of structural concrete. It is tied to the mix design field. You will not be able to select mix designs until a structural concrete production facility is selected.
- 9. Enter the prestressed concrete products production facility that is producing the prestressed concrete products.
- 10. The mix design filter programming for structural concrete samples in MAC is based on project concrete samples. Because of this, select the Allow an Approved Mix Design option to get a list of mix designs to choose from. You must select this option because prestressed production facilities and mix designs are not entered on the Contractor QC Plan in MAC and essentially you are going off list with any selection for program concrete samples.

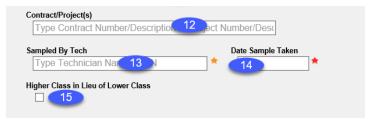
A Mix Design field will appear next to the Allow an Approved Mix Design option.



11. The field is restricted to approved mix designs on the same company profile as the structural concrete production facility. Select the appropriate mix design from the drop down list.

**NOTE**: After the mix design is selected in field 11, MAC will display the mix design category and type. Ensure that the category and type (#7) matches this indicator or you will receive a warning that they do not match.





- 12. The Contracts/Projects field is an optional field. It should be completed if the contract(s) is/are known at the time of the sample:
- a. Enter all known contracts. If the sample represents products being produced for multiple contracts, more than one contract can be entered.
- i. Enter the first contract.
- ii. A new entry field will appear. Continue to enter the contracts until all contracts are identified.
- b. If you know the Financial Project Id, you may enter it instead to find the contract. The field will accept either FDOT Contract Number or Financial Project Id.

**NOTE**: The contracts must be listed if known. The FDOT Verifier will be reviewing the sample to ensure any applicable contracts are entered.

- 13. Enter the name or TIN of the person taking the sample in the Sample By field.
- 14. Enter the date the sample was taken or select it from the calendar in the Date Sample Taken field.
- 15. If a higher class of concrete than is required is used in lieu of a lower class for the entire LOT (for example, using Class VI for concrete piles which require class V special), select the Higher Class in Lieu of Lower Class option. Do **not** select the Higher Class in Lieu of Lower Class option if **ANY** portion of the LOT required the higher class.

A Lower Class drop down list will appear.



Select the category / type combination that represents the lower class of concrete.



- 16. Enter the sample number in the FDOT Sample Number field.
- 17. Enter the quantity that the sample represents in the Quantity Represented field. For example, if the sample quantity is 50 cubic yards, enter 50.
- 18. Enter the quantity unit of measure that the sample represents in the Unit of Measure field. For example, if the sample quantity is 50 cubic yards, enter Cubic Yard(s).
- 19. Enter the lot number in the Lot # field.



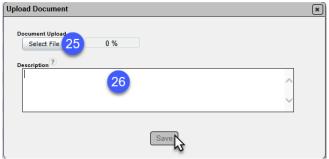
20. Enter the lab id or description in the Testing Lab field. Select the appropriate lab.



- 21. Enter the name of the contact person who can respond to questions from the laboratory about the sample in the Contact Name field.
- 22. Enter the cell phone number in the Cell Phone # field or office phone number in the Office Phone # field of the contact person. Both may be entered, but only one is required. When one is entered, the red star by the other field goes away.
- 23. Enter the contact person's email in the Email field.

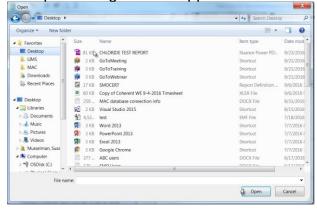


24. Enter a comment, if desired.



- 25. If documents need to be attached to the sample:
- a. Click on the Select File option.

An Open dialog box will appear.



- b. Navigate to the file location and click on it to select it.
- c. Select the Open option to upload the document to the sample.

- 26. Enter a document description if desired.
- 27. Select Save or Save and Submit to save the data.
- a. Selecting Save will set the sample status to Logged. You can make changes to the data without losing what you have entered so far. You can save the sample without all required fields, but you will receive a warning message.
- b. Selecting Save and Submit will set the sample status to Submitted for Lab Testing, ready for plastic properties to be entered and the laboratory to acknowledge receipt of the cylinders.
- a. Selecting Save will save the data entered so far and allow you to continue at a later time if you don't have all the information to submit the sample at this point. The Sample status will be Logged.

**NOTE**: After selecting Save or Save and Submit, the sample login data entry person can enter the plastic properties test results. If you select Save you will need to return to the sample and select the Submit Sample for Testing Option.



28. The View Sample Transmittal Information for Print option will provide a detailed report that should be attached to the cylinders when transported to the laboratory.

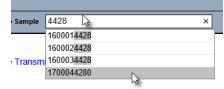
**NOTE**: At this point, the person who created the sample can enter the plastic properties test results See. You do not have to wait for the laboratory to receive the samples to enter the plastic property test results.

B. Creating a Sample from another Sample

MAC has a feature that will allow you to copy the sample information from one sample to another. This is helpful when you have multiple samples to log in with similar information, like a series of QC samples or a QR sample (which can be created from the QC sample from the same lot).



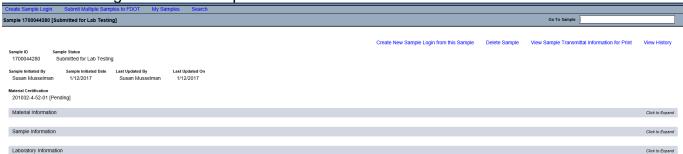
- 1. From the MAC home screen, select the Manage Samples menu option.
- Navigate to the sample you want to copy. There are several ways to do this.



- a. If you know the MAC Sample Id, you can enter it in the Go To Sample Id field.
- i. Start typing the sample id. MAC samples ids are a sequential number. The first five digits are derived numbers and are not needed for the sample search; for example on MAC Sample Id 1600012345, the 16000 is derived the sample can be found by typing 12345 in the Go To field. ii.

Select the appropriate Sample Id from the returned list. If the list only has one result, you must still click on it or select the enter key to populate the field and trigger the search.

You will be navigated to the sample screen.

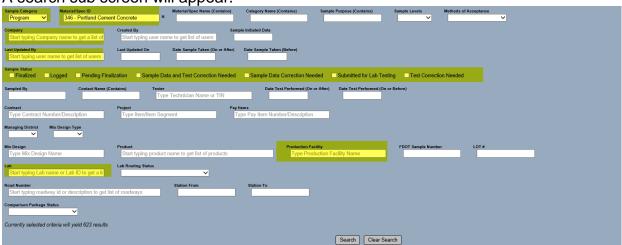


b. You can use the Search screen.



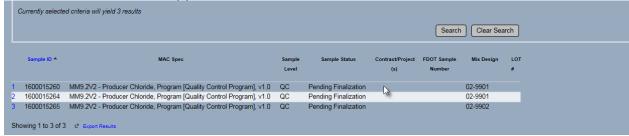
i. Select the Search option.

A search sub screen will appear.



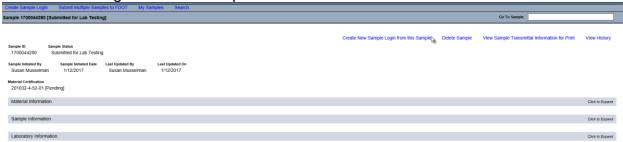
- ii. Use filter options to narrow done the number of samples. The currently selected criteria message will let you know how many samples will be retrieved based on the search criteria provided. Some examples are:
  - 1. Sample Category = Program
  - 2. Material/Spec ID = 346 Portland Cement Concrete
  - 3. You may want to select all the samples under a specific company profile
  - 4. You can filter on samples that were updated by a specific user
  - 5. You can filter on specific sample statuses.
  - 6. Filter on a specific structural concrete production facility Id

The search results are appended to the bottom of the search sub-screen.



iii. Click anywhere on the row of a sample to select it.

You will be navigated to the sample screen.



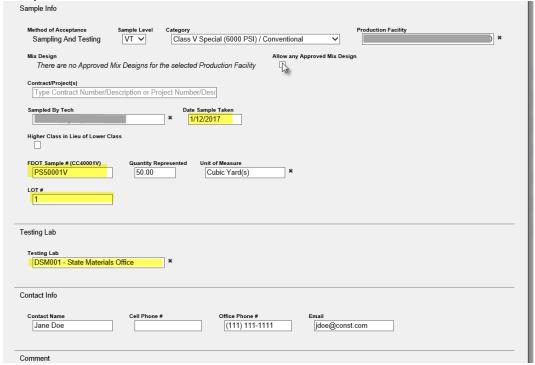
3. Select the Create New Sample Login from this Sample option.

A Create New Sample Login from this Sample dialog box will appear.



4. Select the Continue to Sample Information Screen option.

The Sample Information Screen will appear with most of the original data copied to this new sample.



- The mix design does not get copied.
- a. Select the Allow any Approved Mix Design option to get the Mix Design input field.
- b. Select the correct mix design for this sample from the drop down list.
- 6. Make any changes to the data that was copied that is different on this sample.
- i. Some differences when copying from one sample that is the same sample level (QC sample copied to a QC sample) may be:
- a. Sampled By
- b. Date Sample Taken
- c. FDOT Sample Number
- d. Testing Lab
- ii. Some differences when copying from a sample that is a different sample level (QC to QR or VT to VR)
- a. Sample Level
- b. FDOT Sample Number
- c. Testing Lab
- 7. Add comments, if desired.
- 8. Add documents, if desired.



9. When the data that is different on this sample from the copied sample is revised, select the Save or Save and Submit option.

**NOTE**: You cannot create a new sample from a sample that is not under your company profile, even if the sample is finalized. For example, you cannot create a VT sample from the QC sample.

**NOTE**: At this point, the person who created the sample can enter the plastic properties test results See Chapter 3 – Test Result Entry. You do not have to wait for the laboratory to receive the samples to enter the plastic property test results.

#### C. Warning Messages versus System Messages

Another thing to know is that there is a difference between a system warning and a system error. A system warning can be dismissed upon reading it and you can continue with the login process. It typically signifies something that might be an issue under certain circumstances, but not always. A system error mean that there is something so bad on the sample that you are not permitted to proceed with saving the sample. The error must be addressed before you can advance.

An example of a system warning would be if you attempted to save a sample without all the required information.



Select the X to close the dialog box and go back to the sample to complete more fields. Or select the OK to proceed with saving the sample without the required fields.

Some system warnings appear on the sample. For example, if you select a different category and type than the mix design, you will see this warning message. The system warning messages have the word WARNING in bold read font and an x to dismiss the warning once you have read it.



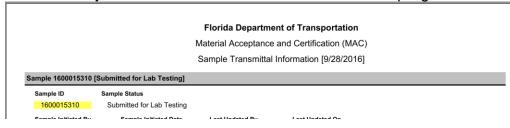
An example of a system error would be when you attempt to submit the same sample without the required fields.



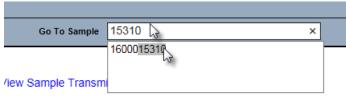
You see that the Save and Submit option is still available (it's not greyed out), but clicking on it will only regenerate the error message until the error is addressed.

# **Chapter 2 – Sample Receipt for Compressive Strength Test**

The laboratory testing the concrete cylinders must first acknowledge receipt of the cylinders before the laboratory test results can be entered. To receive a program structural concrete sample:



 Use the Sample Transmittal Information report attached to the sample to find the MAC Sample Id.

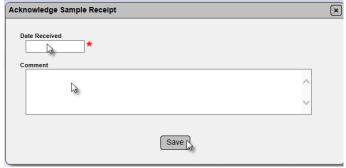


2. Enter the MAC Sample Id in the Go To Sample field. Select the sample from the list to populate the field. Or select the enter key if there is only one result to populate the field.

You will be navigated to the sample.



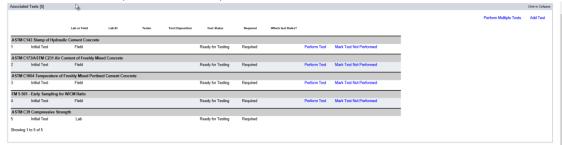
- 3. Click on the Laboratory Information tab to expand it.
- 4. Click on Acknowledge Sample Receipt option to receive the sample.



- 5. Enter the date the sample was physically received in the Date Received field.
- 6. Enter any comments, if desired.
- 7. Select the Save option.

#### **Chapter 3 – Test Result Entry**

A. Result Entry for Plastic Properties Tests



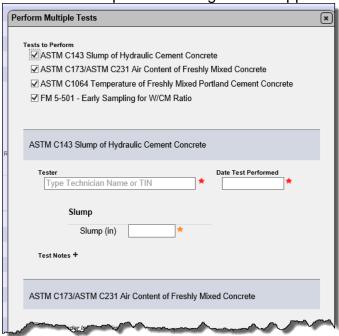
1. Click on the Associated Tests tab to expand it.

There are several ways to enter the test results. You can enter them one at a time or all at once. Since all the plastic properties test results should be available at the same time, the best option is to enter all four tests at the same time.

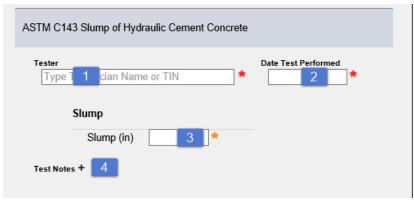


2. Select the Perform Multiple Tests option.

A Perform Multiple Test dialog box will appear.



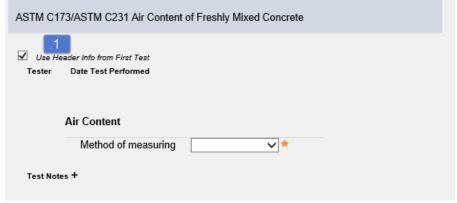
- 3. The default is that all the plastic properties are selected. Clicking on one of these entries will remove the test from the dialog box for data entry purposes, but the test will remain on the sample.
- 4. Enter the test results for each test:



- a. ASTM C143 Slump of Hydraulic Cement Concrete
  - 1. Tester Enter the name or the TIN of the person who performed the slump test.
  - 2. Date Test Performed Enter the date the slump test was performed or select it from the calendar.
  - 3. Enter the slump in inches.
  - 4. You can add additional information about the test in the Test notes by selecting the + by the Test Notes option.



a. A Test Notes field will appear. Enter the test comment in this field.



- b. ASTM C173/ASTM C231- Air Content
  - 1. For the remaining tests you do not need to enter the Tester or the Date Test Performed unless they are different. The Date Test Perfomred should be the same for all plastic properties test and also should be the same data as the Date Sample Taken. The tester may be different. To revise the tester:

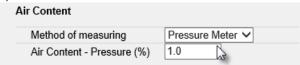


- a) Uncheck the Use Header Info from First Test box.
- b) Tester Enter the name or the TIN of the person who performed the slump test.
- c. Date Test Performed Enter the date the slump test was performed or select it from the calendar.

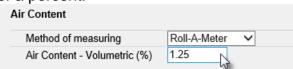


2. Select Pressure Meter or Roll-A-Meter from the Method of measuring drop down list.

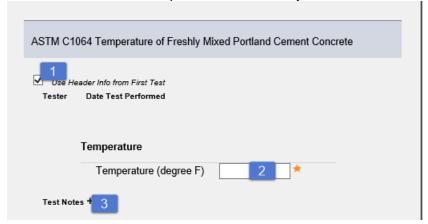
**NOTE**: There is one test definition for air content in MAC that combines the requirements of ASTM C173 and ASTM C231. This is for the convenience of the data entry personnel. Selecting either option will then display additional fields for the appropriate test method. The person who tested the air content will be designated as an active testing technician in either test method, whichever one is selected, but not in both.



a) If Pressure Meter is selected – enter the percent air content to the nearest tenth of a percent.

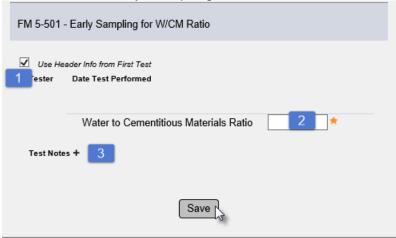


- b) If Roll-A-Meter is selected enter the percent air content to the nearest quarter of a percent.
- 3. Add any test notes, if applicable.
- c. ASTM C1064 Temperature of Freshly Mixed Portland Cement Concrete



- 1. If the tester is different, follow the instructions above to revise the tester.
- 2. Enter the temperature in the Temperature field.
- 3. Add any test notes, if applicable.

#### d. FM 5-501 – Early Sampling for W/CM Ratio



- 1. If the tester is different, follow the instructions above to revise the tester.
- 2. Calculate the w/cm and enter the results in the Water to Cementitious Materials Ratio field.
- 3. Add any test notes, if applicable.

**NOTE**: These are the standard plastic properties for most MAC Spec categories and types. Some MAC Spec category / type selections may have different test definitions. For example, the slump test may not be present, but a slump flow will be. All tests that might be present are not described. The functionality to enter the results is the same. The user should be familiar enough with the material and tests to be able to complete any other test definitions that might appear.

#### B. Designating a Required Test as Not Performed

If a test is required by the MAC Spec and it is not performed, it must be designated as not performed before the sample can be submitted for FDOT Verification. All required tests must be performed and results entered or designated as Test Not Performed before the Submit to FDOT Verification function appears.

**NOTE**: The Submit for FDOT Verification function is not applicable to the user entering the plastic properties results. It will not appear on structural concrete samples until the compressive strength test results are entered or the compressive strength test is designated as not performed. If the data entry person for the plastic properties tests has not entered the test results, the lab data entry person should contact the Contact person listed on the sample and advise them that the plastic properties test result entry is holding up the sample submission to FDOT.

The Data Reviewer for the plastic properties does not have the ability to Submit the Sample to FDOT for Verification. Because theses samples have both field and lab tests on the same sample, the data entry person for the plastic properties should confirm that the plastic properties tests are correct and complete or marked as not performed in a timely manner so that the Data Reviewer for the laboratory has the ability to Submit the Sample to FDOT for Verification Chapter 4 – Reviewing the Data and Submitting the Sample to FDOT for Verification).



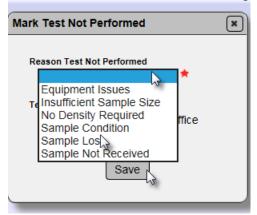
1. Click on the Associated Tests tab to expand it.

You will see if a test is required by looking at the required column. If it is a required test is will say Required. If it is not it will say Optional.

**NOTE**: Currently all tests on the structural concrete samples are required except for sample level IV. For IV Samples, all tests are optional because we don't know which tests we may want to perform for IV and they are not performed for acceptance. For samples with optional tests and the tests are not performed, you can remove the tests or leave them blank and you will still be able to submit the sample to FDOT for Verification as long as the required tests are performed or marked Test not Performed.

2. Select the Mark Test Not Performed option.

A Mark Test Not Performed dialog box will appear.



- 3. Select the reason the test was not performed from the dropdown list.
- 4. Select Save.

The test will receive a test disposition of Fail and the Test Status will be set to Test Not Performed with the reason. This will result in a finding for the project MC Review.

**NOTE**: If a Retest option appears after the results have been entered, do not select it. Retest is not a valid option for structural concrete samples.

C. Result Entry for Laboratory Compressive Strength Tests

After the sample has been received (<u>Chapter 2 – Sample Receipt for Compressive Strength Test</u>), the laboratory data entry person can enter the test results for the compressive strength test.



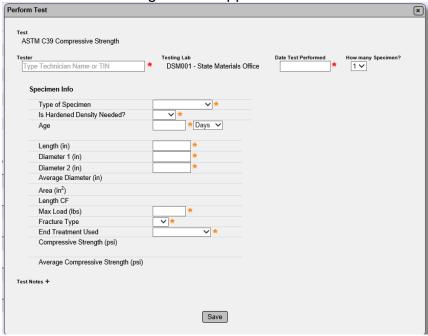
1. Click on the Associated Tests tab to expand it.

If a user in your company profile created the sample (like some QC sample), you will have access to enter the plastic properties and the compressive strength results. If a user in another company created the sample, you will not have access to enter the plastic properties results. Since the plastic properties result entry is described in Section A. Result Entry for Plastic Properties Tests of this chapter, will describe the test result entry for compressive strength only.



2. Select the Perform Test option on the ASTM C39 Compressive Strength test.

A Perform Test dialog box will appear.



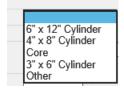


- 3. Tester Enter the name or the TIN of the person who performed the compressive strength test.
- 4. Date Test Performed Enter the date the compressive strength test was performed or select it from the calendar.
- 5. How many Specimen? The compresseive strength test can be for 1, 2, or (normally) 3 cylinders or cores. Select the appropriate number of cylinders or cores from the drop dow list.

Additional fields will now appear on the test.



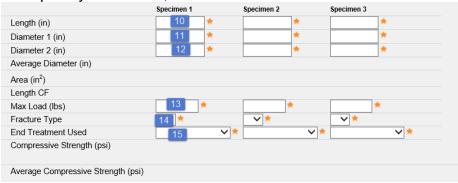
6. Type of Specimen – select the appropriate selection from the drop down list.



**NOTE**: This selection does not impact any calculations or programming. It is strictly for reporting purposes.

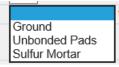
- 7. Is Hardened Density Needed? If a hardened density result is needed, select Yes from the drop down list and it will be calculated. If it is not, select No from the drop down list. If Yes, is selected, additional fields will appear on the test, 2 additional length fields and an average length (for the 3 initial lengths); and a weight field.
- 8. Age -
- a. In the first field enter the number associated with the age. For example, if the age is 28 days, enter 28 in the Age entry field.
- b. Select Days or Hours for from the Age drop down list. For example, if the age is 28 days, leave the default of days in the drop down field.

When you selected the number of specimens, the columns for each specimen were added. For example if you select 3, there will be 3 columns.



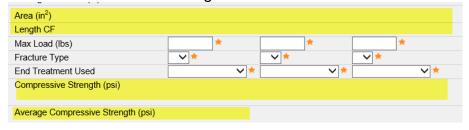
**NOTE**: the tab order for this test definition is down. So you will enter all of the fields for Specimen 1, then Specimen 2, then Specimen 3.

- 10. Length Enter the length, for example 8 (for 8 inches).
- 11. Diameter 1 Enter the first diameter measure.
- 12. Diameter 2 Enter the second diameter measure.
- 13. Max Load enter the Maximum load.
- 14. Fracture Type select the appropriate fracture type from the drop down list.
- 15. End Treatment Used select the appropriate end treatment that was used on the cylinder(s).



- a. If the ground option is selected, then the testing technician is designated as an active testing technician in test method ASTM C39 only.
- b. If the unbonded pads option is selected, then the testing technician is designated as an active testing technician in test method ASTM C39 and ASTM C1231 Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders.
- c. If the sulfur mortar option is selected, then the testing technician is designated as an active testing technician in test method ASTM C39 and ASTM C617 Capping Cylindrical Concrete Specimens.

#### MAC calculates the following fields:



D. Designate the Compressive Strength Test Not Performed

The way to designate the compressive strength test not performed is the same as described in Section B. Designating a Required Test as Not Performed of this chapter.

# Chapter 4 – Reviewing the Data and Submitting the Sample to FDOT for Verification

Once the data entry person has completed the data entry, a Data Reviewer for the company of the laboratory must review the data and confirm that it is ready to be submitted to FDOT for Verification. The Data Reviewer should review the sample information. If there are sample data entry errors, contact the Contact person listed on the sample or the FDOT Verifier.



Select the Perform Test option to review the compressive strength test results.

A Perform Test dialog box will appear. ASTM C39 Compressive Strength Tester Testing Lab Date Test Performed How many Specimen? DSM001 - State Materials Office 1/12/2017 3 🗸 Specimen Info 4" x 8" Cylinder ✓ Type of Specimen Is Hardened Density Needed? No 🗸 28 Days 🗸 Age Specimen 2 Specimen 3 Specimen 1 Length (in) 8.00 8.00 8.00 Diameter 1 (in) 4.01 4.04 4.05 4.03 4.00 4.02 Diameter 2 (in) Average Diameter (in) 4.02 4.02 4.04 Area (in2) 12.69 12.69 12.82 Length CF Max Load (lbs) 78.000 79.250 80.150 1 🗸 1 🗸 1 🗸 Fracture Type End Treatment Used Ground Ground Ground 6 245 6 252 Compressive Strength (psi) 6 147 Average Compressive Strength (psi) 6 2 1 0 Test Notes + Save

- 2. Review the entries and ensure they are correct and complete. If changes need to be made, make the changes and select the Save option to save the changes. If no changes need to be made select the x at the top right corner of the Perform Test dialog box to close the test with no changes.
- 3. Ensure that all required tests are performed or marked as Test Not Performed. If you do not have access to the plastic properties tests, contact the Contact person listed on the sample.



4. When the sample is ready to be submitted for finalization, click on the Submit for FDOT Verification option.

**NOTE**: The Data Reviewer for the company of the laboratory cannot submit the sample for FDOT Verification if the company that created the sample has not entered the plastic property test results. All required tests must be completed or designated as Not Performed for the Submit to FDOT Verification option to appear.

A Submit for FDOT Verification dialog box will appear advising you that when this sample is submitted, you will no longer be able to update the sample and/or test data.



5. Select the Submit for FDOT Verification button to submit the sample.

The sample status will change to Pending Finalization.

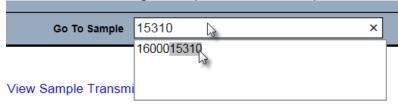


# **Chapter 5 – FDOT Finalization of Program Structural Concrete Samples**

A user with the system role of FDOT Verifier will finalize the Program Structural Concrete samples.

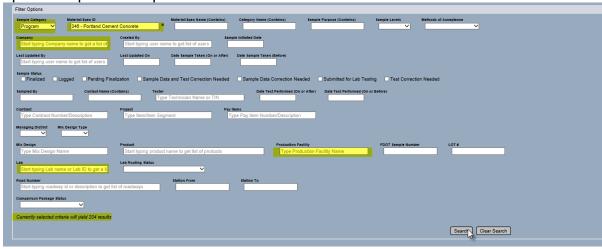


- 1. Select the Samples Menu option.
- 2. Select the Manage Samples sub-menu option.



- 3. If you know the MAC Sample Id, you can enter it into the Go To Sample field.
- 4. Select the sample form the list to navigate to the sample.

If you don't know the MAC Sample Id, you can use the Search option to find it. Select the Search option to open a sample search screen.

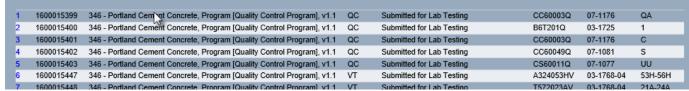


- 5. Use the following filter options:
- a. Sample Category = Program
- b. Material/Spec Id = 346 Portland Cement Concrete
- b. Other possible options:
  - i. Company Name
  - ii. Production Facility
  - iii. Lab

The bottom of the search sub-screen will alert you to the number of entries that meet the search criteria.

6. Select the Search option to perform the search.

The list will display at the bottom of the search sub-screen.



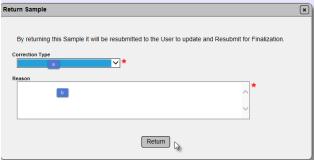
- 7. Click anywhere on the row for the sample to navigate to the sample.
- 8. Review the sample in accordance with the concrete sample finalization checklists with the following exceptions for program samples:
- a. Mix design does not have to be on the Contractor QC Plan ignore the "off list" flag
- b. Structural concrete production facility does not have to be on the Contractor QC Plan ignore the "off list" flag
- c. Project Specific data location information, etc. the contract id(s), if known, should be on the program samples.

If corrections need to be made:

9. Select the Return Sample option.

Finalize Sample Return Sample View Sample Transmittal Information for Print Vie

A Return Sample dialog box will appear.



- a. Select one of the following from the Correction Type dropdown list:
- i) Sample Data Correction returns the sample to the company profile of the user who created the sample. Data Reviewers under that company profile can revise sample header information.
- ii) Test Correction returns the sample to the company profile of the laboratory that tested the sample. Data Reviewers under that company profile can revise test information.
- iii). Sample Data and Test Corrections allows Data Reviewers in both companies to make revisions. The sample data personnel and test data personnel need to communicate to ensure all changes are made before the sample is returned to the FDOT. Users under the company profile of the laboratory are the only ones who can return the sample to the FDOT.
- b. A reason for returning the sample is required. Enter all data that is incorrect or incomplete.

The sample is returned for corrections.



10. When the sample is corrected and returned or if the sample does need to be returned, select the Finalize Sample option to finalize the sample.

# **Chapter 6 – Correcting Returned Samples and Resubmitting to FDOT for Finalization**

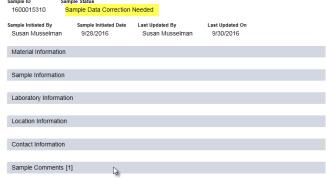
If the FDOT Verifier returns a sample for data corrections, a Data Reviewer must make the corrections and resubmit the sample for FDOT verification.

A. Correcting a Sample Returned for Sample Data Correction

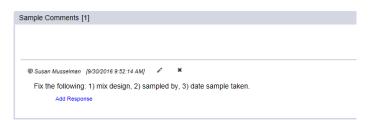
If the sample only needs sample data corrections, a Data Reviewer in the company that created the sample can make the sample changes and resubmit the sample to FDOT for verification.

1. Navigate to the sample using the Go To Sample field or the Search options.

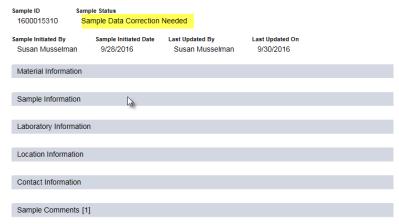
The sample will be in a status of Sample Data Correction Needed.



2. Click on the Sample Comments tab to expand it.



3. Review the sample comment to see why the sample was returned. If you are not sure what the error is, contact the person shown as making the comment for additional information.

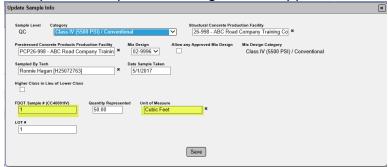


4. Click on the Sample Information tab to expand it.



5. Click on the Update Sample Info option.

An Update Sample Info dialog box will appear.



- 6. Correct the sample data as needed.
- 7. Select the Save option to save the changes.



8. Select the Correction Made – Submit for FDOT Verification option to send the sample back to the FDOT for finalization.

A Correction Made – Submit for FDOT Verification dialog box will appear informing you that this action will take the sample out of your custody and cannot be updated.



- 9. Select Submit for FDOT Verification to return the sample to FDOT.
- B. Correcting a Sample Returned for Test Data

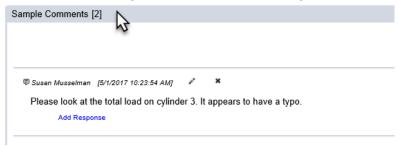
If the sample only needs test data corrections, a Data Reviewer in the company of the laboratory that tested the cylinders can make the test data changes and resubmit the sample to FDOT for verification.

1. Navigate to the sample using the Go To Sample field or the Search options.

The sample will be in a status of Test Data Correction Needed.



2. Click on the Sample Comments tab to expand it.



3. Review the sample comment to see why the sample was returned. If you are not sure what the error is, contact the person shown as making the comment for additional information

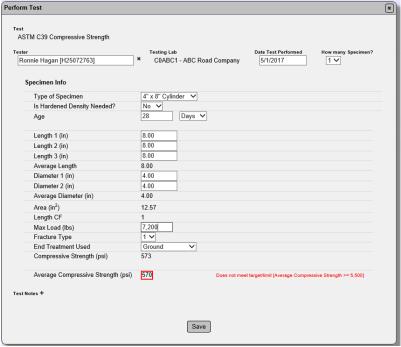


4. Click on the Associated Tests tab to expand it.



5. Select the Perform Test option.

A Perform Test dialog box will appear.



- 6. Make the appropriate test changes.
- 7. Select the Save option to save the changes.



- 8. Select the Correction Made Submit for FDOT Verification option to send the sample back to the FDOT for finalization.
- A Correction Made Submit for FDOT Verification dialog box will appear informing you that this action will take the sample out of your custody and cannot be updated.



9. Select the Submit for FDOT Verification option.

The sample will be returned to Pending Finalization status.

#### C. Sample Returned for Sample and Test Data Corrections

A Data Reviewer from the company that created the sample will follow the instructions in Section A. Correcting a Sample Returned for Sample Data Correction of this chapter to correct the sample data. The user will not have the function to Submit to FDOT for Verification. The user making the sample corrections should notify the user making the test corrections that the sample corrections are complete.

A Data Reviewer from the company of the laboratory will follow the instructions in <u>B. Correcting a Sample Returned for Test Data</u> of this chapter. The user will have the function to Submit to FDOT for Verification. The user making the test result corrections not submit the sample for FDOT Verification until notified by the user making the sample data corrections that they are complete.

#### **Chapter 7 – Sample Comparison Packages**

The FDOT Verifier must associate all program structural concrete samples to a comparison package.

A. Creating a Complete Comparison Packages with a Status of Compares

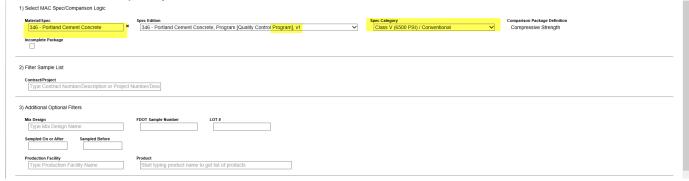


- 1. Select the Samples menu option.
- 2. Select the Closeout Samples sub menu option.



3. Select the Create Comparison Package option.

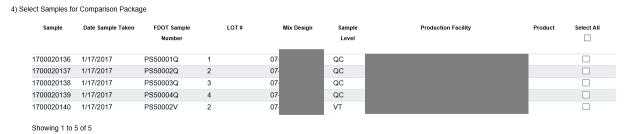
MAC will navigate to the comparison creation screen and populate the filters with the information from the last samples you finalized.

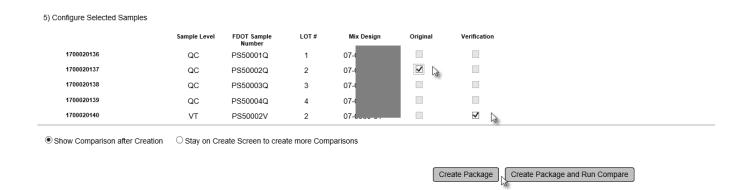


Many times this will be correct.

- 4. If this is not correct, select the x next to the Material/Spec Field. The correct filters are:
- a. Material/Spec = 346 Portland Cement Concrete
- b. Spec Edition = 346 Portland Cement Concrete, Program [Quality Control Program] (vx.x).

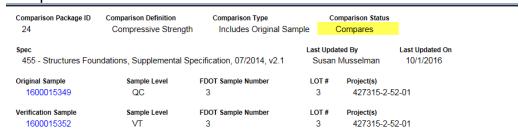
The filtering options will present the samples that have been finalized and are ready to be included in a comparison package.





- 5. Select the available samples for the package. This example has the QC and VT to be compared and 3 associated QC samples for a complete package.
- 6. The system will attempt to determine the original (QC to be compared to VT) sample and verification (VT) sample. If they are incorrect or not designated, select the correct QC and VT samples.
- 7. Select the Create Package and Run Compare option.

In the case where the QC sample results and the VT sample results are within the comparison criteria specified in Section 346, the sample comparison package status will be designated as Compares.

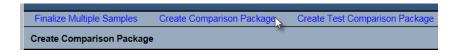


The original QC, Verification VT and associated QC samples are considered to be closed.

**NOTE**: This process can be done whenever the available samples are finalized. The FDOT Verifier does not have to wait until all samples are finalized. The FDOT Verifier must create the comparison package as soon as the QC and VT samples to be compared are finalized in case resolution is needed. Other associated samples can be added as they are finalized by clicking on the Associated Samples tab and selecting the Update Associated Samples option.

B. Creating a Comparison Package with the Status of Incomplete Package

An incomplete package is a package where the original comparison cannot be made because the QC, VT or both are unavailable.

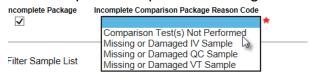


1. Select the Create Comparison Package option.

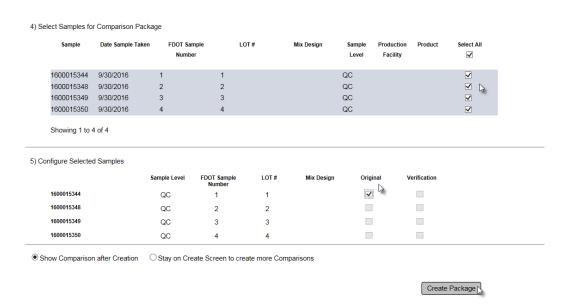
1) Select MAC Spec/Comparison Logic							
Material/Spec 455 - Structures Foundations	×	Spec Edition  [455 - Structures Foundations, Project, Supplemental Specification, 07/2014, v2 ✓	Spec Category Auger Cast Pile Grout	Comparison Package Definition Compressive Strength			
Incomplete Package							

2. Select the Incomplete Package option.

An Incomplete Comparison Package Reason Code dropdown list will appear.



3. Select the appropriate reason why the comparison cannot be performed.



- 4. Select the samples that will be included in the incomplete package.
- 5. The system will require you to select an Original sample. Select any sample to continue even if the original sample is the one that is missing.
- Select the Create Package option.

The comparison package status will be updated to Incomplete Package. The samples in the comparison package are considered to be closed.

C. Creating a Complete Comparison Package with a Status of Does Not Compare

The steps for creating a comparison package with a status of Does Not Compare are the same as described in <u>A. Creating a Complete Comparison Packages with a Status of Compares</u>. The difference is after the comparison is performed, the comparison package status is designated as Does Not Compare. There are additional steps to be taken when this status is received because Resolution is required for program structural concrete samples.

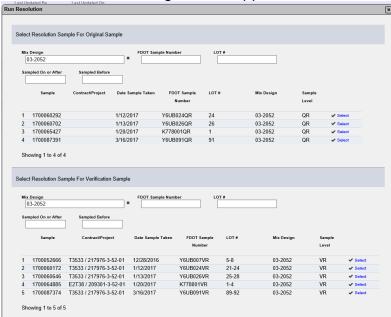
The FDOT Verifier must begin the Resolution process as outlined in Section 346. T

- The FDOT Verifier calls for the hold cylinders to be delivered to the Resolution Lab
- The QC data entry personnel enter the QC hold cylinder as Sample Level QR and sends the cylinder to the Resolution Lab
- The VT data entry personnel enter the QC data entry personnel enter the QC hold cylinder as Sample Level VR and sends the cylinder to the Resolution Lab
- The Resolution Lab acknowledges receipt of both samples, tests both samples, enters the results of both samples and submits both samples to FDOT for Verification
- The FDOT Verifier finalizes both samples

Run Resolution Not Performed

1. When the samples are finalized, on the package that has the comparison status of Does Not Compare, select the Run Resolution option.

A Run Resolution dialog box will appear.

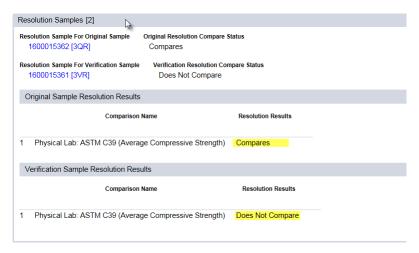


2. Select the appropriate QR and VR samples by clicking on the Select option. You must do this even if only one sample is available for selection.

The Run Resolution dialog box will show the samples selected.



3. Select the Run option to continue.



4. Click on the Resolution Samples tab to expand it. The status of the comparison of the original QC to the QR and the VT to the VR will be displayed.

This is NOT the final resolution. The District Materials and Research Office (DMRO) will conduct the Resolution Investigation. The DMRO will notify the FDOT Verifier via email or phone of the outcome of the Resolution Investigation.



5. Select the Update Final Resolution Status option.

An Update Final Resolution dialog box will appear.



- 6. Select the option from the Final Resolution Status dropdown list that matches the DMRO recommendation.
- 7. Select the Save option.

D. Designating Resolution as Not Performed on a Comparison Package with a Comparison Status of Does Not Compare

Run Resolution Mark Resolution Not Performed Delete Comparison Package View for Print

1. If Resolution cannot be performed, select the Mark Resolution Not Performed option.

A Mark Resolution Not Performed dialog box will appear.



- 2. Select the reason that resolution was not performed from the Comparison Package Resolution Not Performed Reason dropdown list.
- 3. Select the Save option.

The comparison package will be updated with the Comparison Package Resolution Not Performed Reason.



The samples in the comparison package are considered to be closed. The system will send an automatic finding to the MC review for the project the samples represent for the required resolution not being performed.

# **Chapter 8 – FDOT Verifier MC Review Findings for Program Samples**

MAC reviews sample and test data and flags samples with known issues as part of the Materials Certification (MC) Review. MC Review is project based, but program samples with a contract on it will have their findings sent to the MC Review of that contract. If a sample has multiple contracts, any finding will be sent to all the contracts on the sample.

There is a future enhancement to address program MAC sample findings that does not impact MC Review. The enhancement will remove these findings from the MC Review module and send them to their own module where findings can be addressed by the Program Maintenance Users independent of the MC Review process. The enhancement will identify the appropriate flow and users for this process.

Until then, program sample findings must be processed as part of the MC Review so that the MC Review Program Maintenance Users can generate the Project Materials Certification Letter (PMCL).

The following is a summary of the findings and the MC Review action needed for each. This is the general action for these findings. The DMRO always has the option to promote any program sample finding to MAR, if needed, depending on the severity or frequency of the finding.

Finding	MC Review Action	Promote to MAR?
Resolution is required for	MC Reviewer can exclude.	No
(Comparison Name) but was	No action needed from FDOT	
not performed	Verifier	
Resolution for (Comparison	MC Reviewer can exclude.	No
Name} was used for	No action needed from	
acceptance	Prestressed Program	
	Maintenance User	
Sample {Sample Name} has	Promote to MAR	Yes. Prestressed Program
Production Facility (Facility		Maintenance User needs to
Name} that is not		document recommendation
Approved/Accepted		and resolution.
Comparison is required by	MC Reviewer can exclude.	No
the MAC Spec for Sample	No action needed from	
{Sample Name} but was not	Prestressed Program	
performed	Maintenance User	
{Comparison Name}	MC Reviewer can exclude.	No
comparison status Does Not	No action needed from	
Compare	Prestressed Program	
	Maintenance User	
Sample {Sample Name}	MC Reviewer can exclude.	No
Quantity is greater than 50	No action needed from	
CY for Material 346	Prestressed Program	
	Maintenance User	

Sample {Sample Name} Quantity Unit of Measure is not CY for Material 346	MC Reviewer can exclude. No action needed from Prestressed Program Maintenance User	No
Finding	MC Review Action	Promote to MAR?
Test {Test Name} is required but has not been performed on Sample {Sample Name}	Plastic Properties or Compressive Strength – Exclude	No.
Tester {TIN} on sample {Sample ID} is not Qualified	Plastic Properties or Compressive Strength – Promote to MAR	Yes. Prestressed Program Maintenance User needs to document recommendation and resolution.
Laboratory {Lab Name} testing sample {Sample ID} is not Qualified	Plastic Properties or Compressive Strength – Promote to MAR	Yes. Prestressed Program Maintenance User needs to document recommendation and resolution.
Sample {Sample Name} has a failing result on required Test {Test Name}	Plastic Properties QC – Promote to MAR	Yes. Prestressed Program Maintenance User needs to document recommendation and resolution.
	Compressive Strength QC – Promote to MAR	Yes. Prestressed Program Maintenance User needs to document recommendation and resolution.
	Plastic Properties VT – MC Resolved or Exclude	If Excluded, no action needed from Prestressed Program Maintenance User. If MC Reviewer MC Resolves, Prestressed Program Maintenance User may need to respond to finding.
	Compressive Strength VT – MC Resolved or Exclude	If Excluded, no action needed from Prestressed Program Maintenance User. If MC Reviewer MC Resolves, Prestressed Program Maintenance User may need to respond to finding.